AMENDMENTS TO THE CLAIMS

1-39. (Canceled)

40. (Currently Amended) A method for determining drug efficacy, comprising:

a) providing;

i) a patient exhibiting a first electroencephalogram; and

ii) a drug; and,

b) converting said first electroencephalogram to at least one first multivariate outcome measurement <u>wherein said first outcome measurement comprises a plurality of first univariate Z scores</u>, wherein said first multivariate outcome measurement is derived from a frequency band selected from the group consisting of delta, theta, alpha, and beta;

c) administering said drug to said patient;

d) obtaining a second electroencephalogram from said patient and converting said second electroencephalogram to at least one second multivariable outcome measurement <u>wherein said second outcome measurement comprises a plurality of second univariate Z scores</u>, wherein said second multivariate outcome measurement is derived from a frequency band selected from the group consisting of delta, theta, alpha, and beta; and

e) comparing said first multivariate outcome measurement with said second multivariate outcome measurement wherein a difference is identified.

41. (Previously Presented) A method according to claim 40, wherein said comparing comprising using a reference database.

42. (Previously Presented) A method according to claim 40, wherein said difference between said first multivariate outcome measurement and second follow-up multivariate outcome measurement is proportional to the efficacy of said drug.

43-49. (Canceled)

50. (Previously Presented) The method of Claim 40, wherein said delta frequency band comprises a first set of univariate measurements selected from the group consisting of absolute power, relative power, coherence, and symmetry.

51. (Previously Presented) The method of Claim 40, wherein said theta frequency band comprises a second set of univariate measurements selected from the group consisting of absolute power, relative power, coherence, and symmetry.

52. (Previously Presented) The method of Claim 40, wherein said alpha frequency band comprises a third set of univariate measurements selected from the group consisting of absolute power, relative power, coherence, and symmetry.

53. (Previously Presented) The method of Claim 40, wherein said beta frequency band comprises a fourth set of univariate measurements selected from the group consisting of absolute power, relative power, coherence, and symmetry.

54. (Currently Amended) A method for determining drug efficacy, comprising:
   a) providing;
      i) a patient exhibiting a first electroencephalogram; and
      ii) a drug; and,
   b) converting said first electroencephalogram to at least one first multivariate outcome measurement <u>wherein said first outcome measurement comprises a plurality of first univariate Z scores</u>, wherein said first multivariate outcome measurement is derived from a frequency band <u>selected from the group consisting of</u> ranging from approximately 0.5<u>-3.5 Hertz, ranging from approximately 3.5-7.5 Hertz, ranging from approximately 7.5-12.5 Hertz, and ranging from approximately 12.5</u>-35 Hertz;

c) administering said drug to said patient;

d) obtaining a second electroencephalogram from said patient and converting said second electroencephalogram to at least one second multivariable outcome measurement <u>wherein said second outcome measurement comprises a plurality of second univariate Z scores,</u> wherein said second multivariate outcome measurement is derived from a frequency band <u>selected from the group consisting of</u> ranging from approximately 0.5<u>-3.5 Hertz, ranging from approximately 3.5-7.5 Hertz, ranging from approximately 7.5-12.5 Hertz, and ranging from approximately 12.5</u>-35 Hertz; and

e) comparing said first multivariate outcome measurement with said second multivariate outcome measurement wherein a difference is identified.

55. (Previously Presented) A method according to claim 54, wherein said comparing comprising using a reference database.

56. (Previously Presented) A method according to claim 54, wherein said difference between said first multivariate outcome measurement and second follow-up multivariate outcome measurement is proportional to the efficacy of said drug.

57-60. (Withdrawn)